

REMARKS

Receipt of the Office Action of February 2, 2007 is gratefully acknowledged.

The examiner has objected to the abstract because of the reference to "means for" at several places in the abstract. In reply, the abstract has been amended to delete these references.

Claims 1 and 2 have been rejected as indefinite under 35 USC 112, second paragraph, claims 1 - 3 have been rejected on the ground of obviousness - type double patenting over co-pending application No. 10/344,698 in view of Shang et al, and claims 1 - 3 have been rejected under 35 USC 102(b) by Shang et al.

Claims 1-3 have been cancelled, and new claims 4 and 5 have been drafted. Claim 1 was concerned with the overall structure of a computer system, and claims 2 and 3 were dependent on claim 1. New claims 4 and 5 are concerned with a subsystem of the computer system - a look ahead stack management system for configuring a look ahead state of an operand stack.

After careful study, the double patenting rejection and the rejection under 35 USC 102, these rejections are respectfully traversed.

In regard to configuring the operand stack, Shang et al. (U.S. 5,974,531) refers to a conventional technique of a circular buffer (See: column 3 lines 35-61). In fact, the circular-buffer technique is a must for the computer system of Shang et al., because "The register file 17 operates as an on-chip stack cache to store the upper entries of a stack"(column 3 lines 50-51).

In the context of Application No.10/344,698, which adopted the same kind of technique (See: page 30 line 7-page 31 line 2), the circuit for making a modification associated with four or more operations on the advanced mapping file cannot but be complex and become a major bottleneck, because the location of the top of the stack moves with growth and shrinkage of the stack.

On the other hand, with the preferred embodiment disclosed in the present application, "Such a state of the operand stack of a traditional stack machine as { ..., word3, word2, word1 } (the right end is the top of the stack) corresponds to a state of the computer system of the present invention in which, with a, b, c, ... representing contents of mapping-file entries of address 0, 1, 2, ... respectively, word1, word2, word3, ... are (to be) held in the data-file entries whose addresses are a, b, c, ..., respectively" (See: page 15 lines 6-11). Namely, the value of the top/2nd/3rd element of the operand stack is (to be) held in the data-file entry whose address is indicated in the advanced-mapping-file entry of address 0/1/2. Much the same for operand stack elements under the 3rd.

The structure of the advanced mapping file (AMF) of the preferred embodiment is described on page 14 line 23-page 16 line 13 with reference to Fig. 3.


The actual action of the preferred embodiment concerning claims 4 and 5 is described on page 23 line 21-page 24 line 21 (See also: page 8 line 11-page 11 line 7). And, an example action concerning claims 4 and 5 is described on page 28 line 1-page 31 line 2 with reference to Figs. 8-10.

By adopting the look-ahead stack management system according to claims 4 and 5, the circuit for making a modification on the advanced mapping file can be streamlined, and the bottleneck can be removed. It is not possible to achieve this result with the teachings in the noted co-pending application and Shang et al.

Accordingly, claims 4 and 5 do not represent the same invention as do claims 7-12 of co-pending application No. 10/344,698, and cannot be derived from a consideration of Shang et al.

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